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GOOD VACUUM PRACTICE

Working with vacuum systems requires good vacuum practice. CeramTec recommends that the user, at a minimum, address the following items:

- Cleanliness is very important when handling any vacuum equipment. The use of clean vinyl gloves is recommended at all times. Internal surfaces of vacuum equipment should never be touched without gloves as fingerprints will contaminate the system, resulting in decreased pumping efficiency.
- Vacuum grease should be used sparingly. Silicone-based oils or grease should not be used in a system with electronically charged plates; this could insulate the charged plates.
- System components should be made of smooth, oxide-resistant, high-strength materials. The components should be smooth to keep the surface area to a minimum. Rough surfaces provide locations where gases and other contaminants will adhere. Materials that readily oxidize should not be used because oxidation will increase the surface area. Increased surface area results in decreased pumping efficiency. High-strength materials should be used to withstand the wide temperature variations associated with vacuum bakeouts. A good example of a smooth, oxide-resistant, high-strength material is 304 stainless steel.
- Raw material manufacturing processes can influence a material’s compatibility with vacuum applications. CeramTec uses the best materials available. As an example, CeramTec products use ConFlat® flanges made from cross-forged or electroslag remelted 304 stainless steel. These materials provide the greatest reliability for leak free performance.